FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



U. S. Department of Energy Idaho Operations Office

Next Generation Nuclear Plant Program – Gas Cooled
Reactor Design and Demonstration Projects

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Section	on I - FUNDING OPPORTUNITY DESCRIPTION	1
Section	on II - AWARD INFORMATION	4
A.	TYPE OF AWARD INSTRUMENT	4
B.	ESTIMATED FUNDING	4
C.	MAXIMUM AND MINIMUM AWARD SIZE	4
D.	EXPECTED NUMBER OF AWARDS	5
E.	ANTICIPATED AWARD SIZE	5
F.	PERIOD OF PERFORMANCE	5
G.	TYPE OF APPLICATION	5
Section	on III - ELIGIBILITY INFORMATION	5
A.	ELIGIBLE APPLICANTS	5
B.	COST SHARING {or MATCHING}	5
Section	on IV - APPLICATION AND SUBMISSION INFORMATION	6
A.	ADDRESS TO REQUEST APPLICATION PACKAGE	6
B.	LETTER OF INTENT AND PRE-APPLICATION	6
C.	CONTENT AND APPLICATION FORMS	6
D.	SUBMISSIONS FROM SUCCESSFUL APPLICANTS	13
E.	SUBMISSION DATES AND TIMES	13
F.	INTERGOVERNMENTAL REVIEW	13
G.	FUNDING RESTRICTIONS	13
Н.	OTHER SUBMISSION AND REGISTRATION REQUIREMENTS	14
Section	on V - APPLICATION REVIEW INFORMATION	15
A.	CRITERIA	15
B.	REVIEW AND SELECTION PROCESS	17
C.	ANTICIPATED NOTICE OF SELECTION AND AWARD DATES	17
Section	on VI - AWARD ADMINISTRATION INFORMATION	17
A.	AWARD NOTICES	17
Notice	e of Award	18
B.	ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS	18
C.	REPORTING	19
Section	on VII - QUESTIONS/AGENCY CONTACTS	19
Section	on VIII - OTHER INFORMATION	20
A.	MODIFICATIONS	20
B.	GOVERNMENT RIGHT TO REJECT OR NEGOTIATE	20
C.	COMMITMENT OF PUBLIC FUNDS	20
D.	PROPRIETARY APPLICATION INFORMATION	20
Ε.	EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL	21

F.	INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM	21
G.	NOTICE OF RIGHT TO REQUEST PATENT WAIVER	21
Н.	NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES	22
Section	IX - APPENDICES/REFERENCE MATERIAL	22
A.	REPORTING REQUIREMENTS CHECKLIST	22
В.	AWARDEE POINT OF CONTACT DATA INPUT SHEET	22

Section I - FUNDING OPPORTUNITY DESCRIPTION

Background

Generation IV Nuclear Energy Systems Program

Recognizing the broad national and international strategic interests served by nuclear power, the Department of Energy (DOE) initiated the Generation IV Nuclear Systems program (Gen IV) in FY 2002. The mission of the Gen IV is to address critical unanswered questions about advanced nuclear reactor technologies through research and development. This research and development helps establish the viability of next-generation nuclear energy systems and provides results that are useful in extending the operating life of all classes of reactors. One of the Gen IV advanced nuclear technologies is the High Temperature Gas Reactor (HTGR).

Next Generation Nuclear Plant Project Description

The Energy Policy Act of 2005 (EPAct 2005) (Public Law 109-58), Title VI, Subtitle C, directed DOE to establish a project known as the Next Generation Nuclear Plant (NGNP) project.

The NGNP project includes research and development, design, licensing, and construction activities conducted in two phases, leading to operation of an NRC-licensed prototype Gen IV reactor and an associated energy delivery system. Phase 1 is the phase that covers selecting and validating the appropriate technology; carrying out enabling research, development, and demonstration activities, determination of whether it is appropriate to combine electricity generation and hydrogen production in a single prototype nuclear reactor and plant and to carry out initial design activities for a prototype reactor and plant, including development of design methods and safety analytical methods and studies. Phase 2 is the phase that covers development of a final design for the prototype nuclear reactor and plant through a competitive process; application of licenses to construct and operate the prototype nuclear reactor from the Nuclear Regulatory Commission (NRC); and construction and start up operations for the prototype nuclear reactor and its associated hydrogen or electricity production facilities. Both phases include research and development and licensing activities. The prototype reactor would produce hydrogen and/or electricity and could also demonstrate other uses for the high temperature process heat generated by the reactor. The prototype reactor design would be generic enough that plants can be replicated at multiple sites within the United States, including the Idaho National Laboratory.

After studying a variety of options, DOE determined that a high temperature gas-cooled nuclear reactor (HTGR) would best meet the operating parameters associated with these objectives. DOE, through the Idaho National Laboratory, has conducted design and trade studies with input from the commercial industry to define the gross operating parameters of the NGNP so that it will be 1) capable of generating process heat for electricity and/ or hydrogen production, or for other uses and 2) configured for low technical and safety risk with highly reliable operations. The target high core outlet temperature of 750°C or greater associated with the HTGR design would be capable of meeting the needs of many industrial-process-heat end users. Studies conducted to date can be accessed via the World Wide Web at the following internet address: http://www.nextgenerationnuclearplant.com/pressroom/articles/index.shtml.

Purpose of this Funding Opportunity Announcement

Through this competitive announcement the Department of Energy's (DOE's) Office of Nuclear Energy is seeking applications for conceptual design activities for the Next Generation Nuclear Plant (NGNP) Project. The overall Project involves establishing a prototype high temperature gas-cooled nuclear reactor (HTGR) and an associated energy delivery system. After studying a variety of options, DOE has determined that an HTGR facility with an outlet temperature of 750°C or greater would best meet the objectives of the Project.

The full NGNP Project covers a range of activities from research and development to construction that are subject to cost-sharing requirements. This FOA initiates the demonstration component of the NGNP project and therefore all of activities funded through this FOA are subject to the 50% non-federal cost-share requirement. However, EPAct 2005 allows the Secretary of Energy to reduce the cost share requirement as appropriate, taking into consideration any technological risk relating to the activity. The amount of cost

share proposed will be used as a criterion for judging the merit of an application in accordance with Part V.A.2 of this announcement.

FOA Project Description, Goals, and Technical Parameters,

This Funding Opportunity Announcement (FOA) is for the completion of conceptual design activities under Phase 1 of the NGNP project. Statement of Objectives must include the completion of conceptual designs for both the HTGR facility and an associated energy delivery system. The delivery system must be capable of transferring the process heat generated by the reactor for use in producing electricity and/or hydrogen and could also demonstrate other high temperature process heat applications. DOE expects the HTGR facility to be designed in a manner that allows for process heat generation for a variety of industrial uses as discussed in Criterion 2, Section IV, Part 5.A.2.d.

The reactor system will be graphite moderated and helium cooled using low enriched uranium TRISO coated particle fuel. The reactor must be designed to improve upon the already excellent performance and safety record of light water reactors with high availability, reliability, and passive safety features. The reactor must be designed to achieve an outlet temperature of 750°C or greater with a power delivery system capable of meeting the needs of projected industrial customers. Design choices such as power density, thermal output, number of loops, accident mitigation systems, etc, must be fully explained and justified on the basis of plant operability, economics, safety and reliability.

A Conceptual Design Report will require the award recipient to provide a conceptual design, cost and schedule estimate for project completion, and a business plan for integrating final design, licensing and construction. This report will form the basis for a future competitive selection of a final design for the prototype nuclear reactor plant, if the Secretary makes the determination to move to Phase 2. These designs must not limit the reproducibility of the technology. Designs are to be generic enough that plants can be replicated at multiple sites within the United States, including the Idaho National Laboratory. The Conceptual Design Report is due to the Department by August 31, 2010.

Further, the research and development, technology and conceptual design information derived from all Phase 1 activities must be sufficient to be provided to the Nuclear Energy Advisory Committee (NEAC) (formerly referred to as the Nuclear Energy Research Advisory Committee, or "NERAC") for use and support in its recommendation to the Secretary of Energy whether to proceed to Phase 2. It is anticipated that Phase 1 will be completed in January, 2011. Phase 2 activities could include continuation of Phase 1 activities, as well as development of a final design, through a competitive process, and licensing, construction and initial start-up of the NGNP demonstration reactor and plant. A Secretarial decision whether to proceed to Phase 2 will be based on consideration of the strategic mission priorities of DOE, availability of funds and the recommendations of the NEAC. If Phase 2 is initiated, DOE will publish a separate FOA for Phase 2 activities. Phase 2 funding will be competitively awarded and may not be limited to Phase 1 awardees.

Awards

DOE plans to provide funding, on a cost shared basis, to selected applicants for activities encompassed within the scope of work of this FOA. In accordance with EPAct 2005, Section 988, government cost share is limited to no more than 50% of the cost of demonstration or commercial application activities. EPAct 2005 allows the Secretary of Energy to grant a reduction to the cost share requirement if he determines it to be necessary and appropriate, taking into consideration any technological risk relating to the activity. In the event that an applicant's proposal includes a request to reduce the non-Federal cost share, sufficient information must be included to support the applicant's request. As noted in the Merit Review Criteria in Part V, Paragraph A.2, the Department will give preference to applications that include cost share as defined above. Applicants must refer to section 988 of the Energy Policy Act of 2005, 42 U.S.C. § 16352, for the specific requirements and limitations on providing in-kind contributions to satisfy cost-share requirements. Pre-existing intellectual property or work conducted by the DOE or industry before award selection will not be considered as cost-share for this scope of work. Industry cost share may not include other federal funding. In-kind cost share must directly relate to the scope or phase of the specific project. See Part III, Paragraph B, of this FOA for additional information regarding cost sharing requirements.

Financial assistance awards may be in the form of cooperative agreements or Technology Investment Agreements (TIAs) as described in Title 10 of the Code of Federal Regulations, Part 600 (10 CFR 600) and Part 603 (10 CFR 603). The Department of Energy will maintain substantial involvement in the activities funded through this FOA with the nature and extent of DOE's participation to be negotiated in the final agreements. No fee or profit will be paid to the award recipients.

A TIA may offer more flexibility for tailoring requirements than standard financial assistance awards in certain areas, including intellectual property terms, financial management systems that comply with Generally Accepted Accounting Principals for for-profit applicants; cost accounting systems; methods of payment (*e.g.* reimbursements, advance payments, and milestone payments are available), and audit provisions. An applicant may request a TIA and, if selected for negotiation, the contracting officer will determine if awarding a TIA would benefit the objectives of the program.

Statutory Authority

The Atomic Energy Act, as amended, (42 USC 2011 et. seq) and the Energy Policy Act of 2005 (Pub. L. 109-58), Title VI, Subtitle C (42 USC 15801 note).

Application Requirements:

Consistent with the cost share requirements described above, DOE will provide financial assistance to selected applicants to conduct activities described in the Project Management Plan (PMP). A PMP must be included as part of the application. The PMP must describe the full range of engineering and technical tasks, analyses, studies and research and development (R&D) considered necessary to achieve: 1) completion of conceptual design; 2) early interactions with the NRC involving the licensing of an NGNP prototype reactor and similar gas-cooled reactors; and 3) design-specific data to support the preparation and development of an Environmental Impact Statement necessary to comply with the National Environmental Policy Act in connection with potential construction and operation of a demonstration reactor and plant. This PMP must also conform to the guidance given in a later section of this announcement subtitled "Other Attachments."

Each applicant's PMP must reflect the applicant's particular circumstances and design progress toward deployment; however, each applicant's plan also must address the following topics as part of their application. Applicants are not limited to these topics.

- 1. Early interaction with the NRC staff on regulatory issues for a Combined Construction and Operating License (COL) application. Title 10 Part 52 of the Code of Federal Regulations allows for applicants of new nuclear power plants to obtain a combined construction and operating license (COL) for the plant contingent upon meeting pre-established NRC requirements and standards. This "one-step" licensing process allows for timely public access to relevant information, thorough NRC review and resolution of all relevant safety and environmental issues, public hearing, and final NRC approval to build and operate the nuclear power plant before major construction begins. DOE and NRC endorsed the COL as the preferred licensing vehicle in the NGNP Licensing Strategy Report to Congress. The applicant will describe in its PMP activities relevant to identifying and resolving regulatory issues that are impediments to a timely COL application review. These may include:
 - Identification and resolution of generic safety and related issues for gas-cooled reactors
 - Identification of design specific regulatory issues
 - Definition of a process for pre-application review
 - Resources to address the NRC staff and Advisory Committee on Reactor Safety (ACRS) reviews
- **2. Conceptual Reactor Plant Design Completion**: The PMP will define the activities to be performed in the conduct of the conceptual design such as:
 - Full definition of all plant safety systems and systems important to safety

- Primary and secondary system conceptual layouts
- Safety and performance evaluations based on sensitivity to system design features and component selections
- Market studies to verify reactor power and outlet temperature requirements
- Engineering, development, and testing that is needed for design and licensing
- Design of an associated energy delivery system for the use of generated process heat for hydrogen production and/or electricity production, as well as other industrial applications
- 3. Project Schedule, Cost and Financial Analysis: The PMP must include an initial rough order of magnitude cost estimate ranges for design, licensing and construction of the NGNP. After award, a Conceptual Design Report will be required to be submitted. A key component of the Conceptual Design Report will be an updated estimate based on conceptual design information. The confidence level of the estimated cost range must be explicitly addressed in the Conceptual Design Report. Cost estimates may be based on a generic plant design that can be replicated at multiple sites within the United States, including the Idaho National Laboratory.
- **4. NEAC Readiness Review:** The PMP must include activities to support the NEAC independent review of the Conceptual Design Report. It is anticipated that the NEAC review will begin no later than September, 2010.
- **5. Business Plan:** The PMP must include activities to support preparation of a business plan outlining options for how the awardee would integrate final design, licensing and construction of the demonstration plant

Section II - AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

Cooperative Agreements

- DOE anticipates awarding cooperative agreements or TIAs under this program announcement (See Section VI.B.2 Statement of Substantial Involvement).

B. ESTIMATED FUNDING

Amount New Awards

- Approximately **\$40 Million** is expected to be available for new awards under this announcement as the federal contribution.

C. MAXIMUM AND MINIMUM AWARD SIZE

Ceiling (i.e., the maximum amount for an individual award made under this announcement): \$ 40 Million

Floor (i.e., the minimum amount for an individual award made under this announcement): **S None**

D. EXPECTED NUMBER OF AWARDS

Number of Awards Depending on Size

- DOE anticipates making approximately two (2) awards under this announcement.

E. ANTICIPATED AWARD SIZE

Maximum Award Size Range

- DOE anticipates that awards will be in the \$20 million range for the total project period. This amount represents the federal cost share to be matched by the applicant in accordance with cost sharing provisions detailed in this announcement.

F. PERIOD OF PERFORMANCE

Number of Years

- DOE anticipates making final awards in February 2010, with anticipated completion of conceptual design by August 31, 2010.

G. TYPE OF APPLICATION

New Applications Only

- DOE will accept only new applications under this announcement.

Section III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

All Entities excluding Federal Agencies, FFRDC and Non Profit

- All types of entities are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

B. COST SHARING {or MATCHING}

- The cost share must be at least 50% of the total allowable costs for demonstration and commercial application projects (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 CFR Part 600 for the applicable cost sharing requirements.)
- Applicants may request that the Secretary of Energy reduce the cost share requirement at his discretion. In the event that an application includes a request to reduce the non-Federal cost share, sufficient information must be included to support the applicant's request. As noted in the Merit Review Criteria in Part V, Paragraph A.2, the Department will give preference to applications that include cost share as defined above.

- The sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project. While FFRDC contractors are not allowed to be prime awardees, applicants may request FFRDC participation. This participation, if requested and granted, will be part of the Government share.

Section IV - APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE

Apply at Grants.gov

- Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants," and then select "Download Application Package." Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package.

B. LETTER OF INTENT AND PRE-APPLICATION

1. Letter of Intent.

Letter of Intent Requested

Applicants are requested to submit a letter of intent by September 25, 2009. This letter must include the name of the applicant, the title of the project, and a one-paragraph abstract (not to exceed ½ page). The letter of intent must include the teaming partners, if known. In addition, applicants must clearly identify any exceptions and/or any requests for potential waivers to any requirements listed in this announcement. Letters of intent will be used by DOE to organize and expedite the merit review process. Failure to submit such letters will not negatively affect a responsive application submitted in a timely fashion. The letter of intent must be sent by E-mail to Janet K. Surrusco at surrusjk@id.doe.gov.

2. Pre-application

Pre-applications are not required.

C. CONTENT AND APPLICATION FORMS

You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

1. SF 424 (R&R)

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the "Help Mode" (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 17 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business doe/business forms.htm under Certification and Assurances.

2. RESEARCH AND RELATED Other Project Information

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

Project Summary/Abstract (Field 7 on the Form)

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It must be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the DOE may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) {single spaced} with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment"

Project Narrative (Field 8 on the Form)

The project narrative must not exceed 75 pages, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) {single spaced} with font not smaller than 11 point. EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE. The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. See Part VIII.D for instructions on how to mark proprietary application information. To attach a Project Narrative, click "Add Attachment."

The project narrative must include:

- Project Objectives: This section must provide a clear, concise statement of the specific objectives/aims of the proposed project.
- Merit Review Criterion Discussion: The section must be formatted to address each of the merit review criterion and sub-criterion listed in Part V.A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.
- Relevance and Outcomes/Impacts: This section must explain the relevance of the effort to the objectives in the program announcement and the expected outcomes and/or impacts.
- Roles Of Participants: For multi-organizational or multi-investigator projects, describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed.
- Multiple Principal Investigators: The applicant, whether a single organization or team/partnership/consortium, must indicate if the project will include multiple PIs. This decision is solely the responsibility of the applicant. If multiple PIs will be designated, the application must identify the Contact PI/Project Coordinator and provide a "Coordination and Management Plan" that describes the organization structure of the project as it pertains to the designation of multiple PIs. This plan must, at a minimum, include:
 - process for making decisions on scientific/technical direction;
 - publications;
 - intellectual property issues;
 - communication plans;
 - procedures for resolving conflicts; and

- PIs' roles and administrative, technical, and scientific responsibilities for the project.
- Bibliography And References, If Applicable: Provide a bibliography for any references cited in the Project Narrative section. This section must include only bibliographic citations.
- Statement Of Project Objectives (SOPO): The project narrative must contain a single, detailed Statement of Project Objectives that addresses how the project objectives will be met. The Statement of Project Objectives must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below. The Statement of Project Objectives may be released to the public by DOE in whole or in part at any time. It is therefore required that it will not contain proprietary or confidential business information. The Statement of Project Objectives, as part of the Project Narrative, must be less than 20 pages in total for the proposed work. Applicants must prepare the Statement of Project Objectives in the following format:

TITLE OF WORK TO BE PERFORMED (Insert the title of work to be performed. Be concise and descriptive.)

A. OBJECTIVES

Include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work.

B. SCOPE OF WORK

This section must not exceed one-half page and must summarize the effort and approach to achieve the objective(s) of the work for each Phase.

C. TASKS TO BE PERFORMED

Tasks, concisely written, must be provided in a logical sequence and must be divided into the phases of the project, as appropriate. This section provides a brief summary of the planned approach to this project. An outline of the Project Management Plan (referenced in Task 1.0 below and required to be submitted with your application) is provided later in this Section.

PHASE I

Task 1.0 - Project Management and Planning

(Description includes work elements required to revise and maintain the Project Management Plan and to manage and report on activities in accordance with the plan)

Subtask 1.1 (Description)

Task 2.0 - (Title)

PHASE II (Optional)

Task 3.0 - (Title)

D. DELIVERABLES

The periodic, topical, and final reports will be submitted in accordance with the attached "Federal Assistance Reporting Checklist" and the instructions accompanying the checklist.

[Note: The Recipient will provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered. These reports will also be identified within the text of the Statement of Project Objectives. See the following examples:

- 1. Task 1.1 (Report Description)
- 2. Task 2.2 (Report Description)

- Biographical Sketch Appendix: Provide a biographical sketch for the project director/principal investigator (PD/PI) and each senior/key person listed in Section A on the R&R Budget form. Provide the biographical sketch information as an appendix to your project narrative. Do not attach a separate file. The biographical sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11"paper with 1 inch margins (top, bottom, left, and right) {single spaced} with font not smaller than 11 point and must include:

Education and Training:

Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree, and year.

Research and Professional Experience:

Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications:

Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents and software systems developed may be provided in addition to or substituted for publications.

Synergistic Activities:

List no more than 5 professional and scholarly activities related to the effort proposed.

Current and Pending Support:

Provide a list of all current and pending support (both Federal and non-Federal) for the Project Director/Principal Investigator(s) (PD/PI) and senior/key persons, including subawardees, for ongoing projects and pending applications. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project by the senior/key person. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review.

- Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers Appendix: Provide the following information in this section. This appendix will not count in the project narrative page limitation:

Collaborators and Co-editors: List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."

Graduate and Postdoctoral Advisors and Advisees: List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates. If there are no graduate or postdoctoral associates, state "None."

Third Parties Contributing to Cost Sharing Appendix: At the time you submit your application, you must have a letter from each third party (i.e., a party other than the organization submitting the application). The letter must state that the third party is committed to providing a specific minimum dollar amount of cost sharing. By submitting your application, you are providing assurance that you have signed letters of commitment. In an appendix to your Project Narrative, you must identify the following information for each third party contributing to cost sharing: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the

proposed cost sharing - cash, services, or property. This appendix will not count in the project narrative page limitation. Successful applicants must provide the signed letters of commitments within the number of days specified in Part IV.D, Submissions from Successful Applicants.

Bibliography & References Cited Appendix: Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants must be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in Field 9. This appendix will not count in the project narrative page limitation.

Other Attachments (Field 12 on the form)

If you need to elaborate on your responses to questions 1-6 on the "Other Project Information" document, attach a file in field 12.

Also, attach the following files:

Project Management Plan

This plan must be formatted to include the following sections with each section to include the information as described below:

- A. Executive Summary: Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information is included in the Project Narrative (Field 8) and must be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document.
- B. Risk Management: Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues.
- C. Milestone Log: Provide milestones for each budget period (or phase) of the project. Each milestone must include a title and planned completion date, Milestones must be quantitative and show progress toward budget period and/or project goals.

[Note: During project performance, the Recipient will report the Milestone Status as part of the required quarterly Progress Report as prescribed under Attachment 4, Reporting Requirements Checklist. The Milestone Status will present actual performance in comparison with Milestone Log, and include:

- (1) the <u>actual</u> status and progress of the project,
- (2) specific progress made toward achieving the project's milestones, and,
- (3) any proposed changes in the project's schedule required to complete milestones.]
- D. Funding and Costing Profile: Provide a table (the Project Funding Profile) that shows, by budget period, the amount of government funding going to each project team member. Describe how the recipient will provide earned value data and a narrative of project status on a monthly basis. Also provide a table (the Project Costing Profile) that projects, by month, the expenditure of government and non-government funds for the first budget period, at a minimum.
- E. Project Timeline: Provide a timeline of the project (similar to a Gantt chart) broken down by each task and subtask, as described in the Statement of Project Objectives. The timeline must include for each task, a start date, and end date. The timeline must show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section C).

F. Success Criteria at Decision Points: Provide success criteria for each decision point in the project, including go/no-go decision points and the conclusions of budget periods and the entire project. The success criteria must be objective and stated in terms of specific, measurable, and repeatable data. Usually, the success criteria pertain to desirable outcomes, results, and observations from the project.

[Note: As the first task in the Statement of Project Objectives, successful applicants will revise the version of the Project Management Plan that is submitted with their application by including details from the negotiation process. This Project Management Plan will be updated by the Recipient as the project progresses, and the Recipient must use this plan to report schedule and budget variances.]

Save this plan in a single file named "pmp.pdf" and click on "Add Attachments" in Field 12 to attach.

Commitment Letters from Third Parties Contributing to Cost Sharing

If a third party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter must also identify the proposed cost sharing (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named "CLTP.pdf" and click on "Add Attachments" in Field 12 to attach.

Budget for DOE Federally Funded Research and Development Center (FFRDC) Contractor, if applicable.

If a DOE FFRDC contractor is to perform a portion of the work, you must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This order and the DOE Field Work Proposal form are available at

http://management.energy.gov/business_doe/business_forms.htm. Use the FFRDC name as the file name (up to 10 letters) and attach to the R&R Other Project Information form in Field 12 - Add Attachments.

NOTE: While FFRDC contractors are not allowed to be prime awardees, applicants may request FFRDC participation. This participation, if requested and granted, will be part of the Government share.

Exceptions/Requests for Waivers

Applicants must clearly identify any exceptions and/or requests for potential waivers. This includes any requests for the reduction of the 50% cost share requirement.

3. RESEARCH AND RELATED BUDGET (TOTAL FED + NON-FED)

Complete the Research and Related Budget (Total Fed & Non-Fed) form in accordance with the instructions on the form. (Activate Help Mode to see instructions.) You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See Section IV.G).

Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature,

amount, and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

4. R&R SUBAWARD (Total Fed + Non-Fed) FORM

Budgets for Subawardees, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET (Total Fed + Non-Fed) FORM and e-mail it to each subawardee that is required to submit a separate budget. After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name as the file name.

5. Project/Performance Site Location (s)

Indicate the primary site where the applicant will perform the work under this FOA. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2 digit state code followed by a dash and a 3 digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

6. Disclosure of Lobbying Activities (SF-LLL)

If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

Summary of Required Forms and Files

Your application must include the following documents:

Name of Document	Format	Attach to
SF 424 (R&R)	Form	N/A
RESEARCH AND RELATED Other Project	Form	N/A
Information		
Project Summary/Abstract	PDF	Field 6
Project Narrative, including required	PDF	Field 7
appendices		
Budget for DOE FFRDC, if applicable	PDF	Field 11
Project Management Plan	PDF	Field 11
Commitment Letters from Third Parties	PDF	Field 11
Environmental Checklist	PDF	Field 11
Exceptions/Requests for Waiver	PDF	Field 11
RESEARCH & RELATED SENIOR/KEY	Form	N/A
PERSON (Optional)		
Biographical Sketch	PDF	Attach to appropriate
		block
Current and Pending Support	PDF	Attach to appropriate
		block

RESEARCH AND RELATED BUDGET	Form	N/A
(Total Fed + Non-Fed)		
Budget Justification	PDF	Field K
R&R SUBAWARD BUDGET (Total Fed +	Form	N/A
Non-Fed) ATTACHMENT(S) FORM, if		
applicable		
SF-LLL Disclosure of Lobbying Activities, if	Form	N/A
applicable		

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable
- Commitment Letter from Third Parties Contributing to Cost Sharing, if applicable

E. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

- Pre-applications are not required.

2. Letter of Intent Due Date

- Letters of intent must be sent, via e-mail, to Janet Surrusco at surrusjk@id.doe.gov by September 25, 2009, not later than 8:00 PM Eastern Time, and include the information as described in Part IV, Section B.

3. Application Due Date

- Applications must be received by **November 16, 2009, not later than 8:00 PM Eastern Time**. You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE MAY NOT BE REVIEWED OR CONSIDERED FOR AWARD.

F. INTERGOVERNMENTAL REVIEW

Program Not Subject to Executive Order 12372

- This program is not subject to Executive Order 12372 - Intergovernmental Review of Federal Programs.

G. FUNDING RESTRICTIONS

Cost Principles. Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR Part 600. The cost principles for commercial organization are in FAR Part 31.

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in

10 CFR Part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

Grants.gov

APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED

FOR AWARD. Submit electronic applications through the "Apply for Grants" function at www.Grants.gov. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

2. Registration Process

One Time Registration Process

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), and register with FedConnect). Applicants, who are not registered with CCR and Fedconnect, should allow at least 10 days to complete these requirements. It is suggested that the process be started as soon as possible.

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See www.grants.gov/GetStarted). We recommend that you start this process at least three weeks before the application due date. It may take 21 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at http://www.grants.gov/assets/OrganizationRegCheck.pdf to guide you through the process. IMPORTANT: During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called "Marketing Partner identification Number" (MPIN). When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e., Grants.gov registration).

Application Submittal Announcement

Grants.gov requires Applicants to use the compatible version of Adobe Reader software to complete a Grants.gov Adobe application package. To ensure you have the Grants.gov compatible version of Adobe Reader, visit the download software page at http://www.grants.gov/help/download_software.jsp

Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. When the AOR receives email Number 5, it is their responsibility to follow the instructions in the email to logon to IIPS and verify that their application was received by DOE. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the five e-mails are:

Number 1 - Grants.gov Submission Receipt Number

Number 2 - Grants.gov Submission Validation Receipt for Application Number

Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number

Section V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

Application Award Eligibility

- Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the funding opportunity announcement.

2. Merit Review Criteria

- Only those applications meeting the minimum requirements of this FOA will be considered for selection. Selection will be made in accordance with the following selection criteria and programmatic considerations listed in Paragraph D. All applications will be evaluated in accordance with the following criteria (listed in descending order of importance). The applications must be fully responsive to each of the following criteria.
 - a. <u>Criterion 1</u>: Technical Quality (40 points). This criterion addresses the technical quality of the application and proposed work. This includes completeness and clarity of the technical application, appropriateness/adequacy of the proposed methodology or approach, adequacy and appropriateness of the schedule including sequence of project tasks, principal milestones, and time for each task, and planned assignment of responsibilities and level of resources.
 - b. <u>Criterion 2:</u> Potential for successful commercial application (20 points) This criterion addresses the regulatory acceptability, level of technology development and near-term commercialization potential of the selected plant design. This criterion also includes evaluation of the interest level of industry in the proposed project through assessment of teaming arrangements, level and degree of participation from power generation companies and partnership arrangements to accomplish the proposed work. In addition, preference will be given to applications that include designs that can demonstrate uses for the high outlet temperature of the NGNP HTGR in addition to the production of hydrogen or electricity.
 - c. <u>Criterion 3:</u> Project Approach (20 points) This criterion addresses the approach to be utilized in project management including:
 - i. Management of technical risk and approach to proactive risk management.
 - ii. Approach to cost reduction/integration of design with technology development.
 - iii. Approach to developing technical and functional specifications for the NGNP prototype and follow-on commercial plants.
 - iv. Approach to developing project schedule, NGNP prototype cost estimate, and economic assessments of commercial plants.
 - v. Approach to international collaborations.

- d. <u>Criterion 4:</u> Applicant/Team Capabilities (15 points) This criterion addresses the capabilities and qualifications of project manager, key personnel and subcontractors; and of the adequacy of resources applied by participating organizations. It also addresses overall project management skills including:
 - i. Demonstrated ability to handle major nuclear design projects
 - ii. Clear involvement of vendors, owners, operators, end-users
 - iii. Proven ability to manage communications among multiple team partners and with DOE
 - iv. Vision for the entire project with emphasis on a clear path to design completion
 - v. Quality/credible schedule through startup with emphasis for earlier completion date
 - vi. Comprehensive outreach plan
- e. <u>Criterion 5:</u> Cost-share (5 points) This criterion addresses non-Federal funding proposed for applications. The Department will give preference to applications that recommend non-Federal cost-share equal to or greater than 50% for the proposed activities.

3. Other Selection Factors

Program Policy Factors

- The selection official will consider the following program policy factors in the selection process:
 - a. The degree to which award of the proposed project optimizes use of the available DOE funding to achieving Next Generation Nuclear Plant program goals.
 - b. Benefits to the government of making awards for distinct technologies.
 - c. The extent to which the proposed project contributes to overcoming or removing regulatory uncertainties associated with deployment of future or subsequent gas cooled as well as other advanced concept nuclear power plants in the United States. This also includes consideration given in the proposed project to environmental factors/consequences.
 - d. The extent to which the proposed project contributes to overcoming or removing technical and economical uncertainties associated with deployment of future or subsequent gas cooled nuclear power plants in the United States.
 - e. Reasonableness of the proposed project cost. This includes evaluation of the allocation among multiple participating organizations where applicable, reasonableness of proposed costs for each task and overall project cost and cost-share between government and industry. It also includes extent of non-Federal cost share proposed by the applicant.
 - f. Extent or degree to which project funds, particularly government funds, are allocated to U.S. companies, corporations or subsidiaries for project activities performed in the United States.
 - g. Extent to which the selected design will be commercially available in the US, which would include identification of who owns key Intellectual Property and how that

Intellectual Property will be managed to assure commercial availability in the United States.

B. REVIEW AND SELECTION PROCESS

1. Merit Review

Applications Subject to Merit Review

- Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance." This guide is available under Financial Assistance, Regulations and Guidance at http://www.management.energy.gov/documents/meritrev.pdf.

2. Selection

Selection Official Consideration

- The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

3. Discussions and Award

Government Discussions with Applicant

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR Part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

Selection and Award Date

- DOE anticipates notifying applicants selected for award by the end of December 2009, and making awards by the end of February 2010.

Section VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

Selected Applicants Notification

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Section IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award

Notice of Award

A Notice of Financial Assistance Award or Assistance Agreement issued by the contracting officer is the authorizing award document. It normally includes either as an attachment or by reference: (1) Special Terms and Conditions; (2) Applicable program regulations, if any; (3) Application as approved by DOE.; (4) DOE assistance regulations at 10 CFR Part 600; (5) National Policy Assurances To Be Incorporated As Award Terms; (6) Budget Summary; and (7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

For grants and cooperative agreements made to universities, non-profits and other entities subject to OMB Circular A-110 the Award also includes the Research Terms and Conditions located at http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600 and for TIAs in 10 CFR Part 603 (See: http://ecfr.gpoaccess.gov), except for awards made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at http://www.nsf.gov/awards/managing/fed_dem_part.jsp.

2. Special Terms and Conditions and National Policy Requirements

Special Terms and Conditions and National Policy Requirements. The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at http://management.energy.gov/business doe/business forms.htm.

The National Policy Assurances To Be Incorporated As Award Terms are located at DOE http://management.energy.gov/business doe/business forms.htm.

Intellectual Property Provisions. The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at http://www.gc.doe.gov/financial assistance awards.htm.

The applicant's letter of intent and application must clearly identify any exceptions to the standard intellectual property provisions and/or any requests for potential waivers.

Statement of Substantial Involvement

- a. DOE anticipates having substantial involvement during the project period, through technical assistance, advice, intervention, and integration with the recipient. The recipient's responsibilities are listed in paragraph b and DOE's responsibilities are listed in paragraph c.
- b. Recipient's responsibilities. The recipient is responsible for:
 - i. Performing the activities supported by this award, including providing the required personnel, facilities, equipment, supplies and services;
 - Defining approaches and plans, including the identification of needed research and development activities, submitting the plans to DOE for review, and incorporating DOE's comments;

- iii. Managing and conducting the project activities, including coordinating with DOE management and operating (M&O) contractors, and other governmental regulatory bodies (e.g. U.S. Nuclear Regulatory Commission) on activities performed under the M&O contracts that are related to the project;
- iv. Attending program review meetings and reporting project status;
- v. Submitting technical reports as stated in the *Federal Assistance Reporting Checklist*, and incorporating DOE comments;
- vi. Presenting the project results at appropriate technical conferences or meetings as directed by the contracting officer; and
- vii. Providing monthly earned value data per ANSI-748 on project progress as well as project narratives describing the project status.
- c. DOE responsibilities. DOE is responsible for:
 - i. Reviewing in a timely manner project plans and reports and providing comments and guidance regarding the work effort;
 - Conducting project review meetings to ensure adequate progress and that the work accomplishes the Statement of Objectives. Redirecting work or shifting work emphasis, if needed;
 - iii. Promoting and facilitating project activities, including disseminating project results through presentations and publications;
 - iv. Serving as scientific/technical liaison between the recipient and other government agencies and national laboratories,
 - v. Performing technical reviews to determine whether to fund the next phase of the project, and
 - vi. Performing mutually agreed upon research and development activities.

There are limitations on recipient and DOE responsibilities and authorities in the performance of the project activities. Performance of the project activities must be within the scope of the Statement of Objectives, the terms and conditions of the Cooperative Agreement, and the funding and schedule constraints.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. For a <u>sample</u> Checklist, see the attached Federal Assistance Reporting Checklist. Modifications to this sample checklist may be made during negotiations of individual awards.

Section VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the announcement must be submitted through the FedConnect portal at https://www.fedconnect.net/FedConnect/ by 09/25/2009. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the process for downloading an application package must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE cannot answer these questions.

B. AGENCY CONTACT

Name: Janet K. Surrusco E-mail: <u>surrusjk@id.doe.gov</u>

For questions regarding this FOA, follow the procedures outlined in Part VII.A.

Section VIII - OTHER INFORMATION

A. MODIFICATIONS

Notices of any modifications to this announcement will be posted on Grants.gov and FedConnect. You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through FedConnect. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, must be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages _____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data will be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE will have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM

<u>Patent Rights</u>. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See "Notice of Right to Request Patent Waiver" in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE's own needs or to insure the commercialization of technology developed under a DOE agreement.

For this FOA, DOE will require rights to proprietary "limited rights data" and "restricted computer software", not only for purposes such as evaluation and emergency repair and overhaul, but also, for Phase I awardees, to make license rights for such data and software, and relevant background patents, available to a Phase II awardee, as may be necessary for project completion; and, in addition, the awardee for Phase I or Phase II, may be required to grant to responsible third parties, for purposes of practicing NGNP technology, a nonexclusive license in any such limited rights data, restricted computer software, or relevant background patents, on reasonable terms, for commercial purposes, if not being reasonably supplied by the awardee or its licensees.

Special Protected Data Statutes. This program is covered by a special protected data statute. The provisions of the statute provide for the protection from public disclosure, for a period of up to 5 years from the development of the information, of data that would be trade secret, or commercial or financial information that is privileged or confidential, if the information had been obtained from a non-Federal party. Generally, the provision entitled, Rights in Data – Programs Covered Under Special Protected Data Statutes (10 CFR 600 Appendix A to Subpart D), would apply to an award made under this announcement. This provision will identify data or categories of data first produced in the performance of the award that will be made available to the public, notwithstanding the statutory authority to withhold data from public dissemination, and will also identify data that will be recognized by the parties as protected data.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business

and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

Section IX - APPENDICES/REFERENCE MATERIAL

- A. REPORTING REQUIREMENTS CHECKLIST
- B. AWARDEE POINT OF CONTACT DATA INPUT SHEET